

APPENDIX A

HISTORY OF THE ADMINISTRATION OF UNITED STATES NUCLEAR WEAPONS PROGRAMS

The nuclear weapons program of the United States began with an August 1939 letter from Albert Einstein to President Franklin D. Roosevelt informing him of the recent research on nuclear chain reactions in uranium. Two German physicists, Otto Hahn and Fritz Strassman, had discovered the process of fission in December 1938. After Einstein alerted him to the possibility of harnessing this phenomenon to produce extremely powerful bombs, Roosevelt established a joint Army-Navy committee to further study this question. In November 1939, this “Uranium Committee” recommended that the military begin funding fission chain reaction research, already being conducted at several American universities.

By the time the Uranium Committee made its recommendation, Europe was at war, commencing with the German invasion of Poland on September 1, 1939. As the war in Europe intensified, Roosevelt established the National Defense Research Committee to oversee the work of the Uranium Committee and other Government scientific research projects, including those on radar and anti-submarine warfare. Even before the United States’ entry into the War, the Uranium Committee continued to recommend government funding of chain reaction and isotope separation research. Concurrently, American universities continued their research, including the discovery, in early 1941 at the University of California in Berkeley, of an artificially-produced fissile element, soon named “plutonium.”

In June 1941, the National Defense Research Committee re-formed into an advisory board to the Office of Scientific Research and Development and the S-1 Committee replaced the Uranium Committee. A series of reports by the National Academy of Sciences as well as the British MAUD committee¹ report in 1941 emphasized the feasibility of the atomic bomb and the need for further research. In January 1942, a month after the Japanese attack on Pearl Harbor and the entry of the United States into the war, President Roosevelt approved the development of the atomic bomb. The project was established under the U.S. Army Corps of Engineers Manhattan Engineer District (MED) in August 1942.²

The Manhattan Engineer District, commanded by General Leslie R. Groves, oversaw all aspects of the wartime atomic bomb program, including scientific research, the acquisition of raw materials, the construction and operation of facilities, and the development, manufacturing, and testing of the first atomic weapons.

Security and secrecy were also the responsibility of the MED. The existence of the Manhattan Project and the atomic bomb was not revealed to the public until August 6, 1945, after the destruction of Hiroshima.

¹ “MAUD” is a code name for the committee, not an acronym. Rhodes, Richard, *The Making of the Atomic Bomb* (New York: Simon & Schuster, 1986), pg. 341.

² A brief history of the Manhattan project and the events that led up to it can be found in F. G. Gosling, *The Manhattan Project: Making the Atomic Bomb*, DOE/HR-0096 (Washington, D.C.: U.S. Government Printing Office, September 1994.) More detailed historical information can be found in: Hewlett, Richard G. and Oscar Anderson, Jr., *The New World, 1939-1946, Volume I of A History of the United States Atomic Energy Commission* (University Park: Pennsylvania State University Press, 1962); Jones, Vincent C., *Manhattan: The Army and the Atomic Bomb* (Washington, D.C.: U.S. Government Printing Office, 1985); Rhodes, Richard, *The Making of the Atomic Bomb* (New York: Simon & Schuster, 1986); and Smyth, Henry D., *A General Account of the Development of Methods of Using Atomic Energy for Military Purposes Under the Auspices of the United States Government, 1940-1945* (Washington, D.C.: U.S. Government Printing Office, 1945).

The Atomic Energy Commission

After intense debate, Congress decided to transfer the United States' atomic energy programs from the Army to a civilian agency. The MED was superseded on January 1, 1947 by the United States Atomic Energy Commission (AEC)³ established by the Atomic Energy Act of 1946. AEC was responsible for all aspects of the development and regulation of nuclear technology, but chiefly the management of the nuclear weapons complex. The AEC expanded and centralized the weapons complex into a network of Government-owned, contractor-operated facilities by the mid 1950s.

The AEA has been amended several times, but most significantly in 1954 to encourage the peaceful use of atomic energy. After 1954, the AEC established numerous civilian atomic energy programs. Basic physics research and the development and commercialization of nuclear power and other industrial uses of nuclear technology were the main focus of the "Atoms for Peace" program.

ERDA and the Department of Energy⁴

Following the energy crisis of the early 1970s, the executive and legislative branches began a series of reorganizations in an effort to better coordinate the federal government's energy policies and programs, including the atomic energy programs of the AEC. AEC was abolished by the Energy Reorganization Act in 1974. Regulatory authority was transferred to the newly-formed Nuclear Regulatory Commission (NRC) while the AEC's research and development activities, including the nuclear weapons complex, were given to the newly-created Energy Research and Development Administration (ERDA).

In 1977, the Department of Energy Organization Act created a cabinet level agency, the Department of Energy (DOE) and transferred ERDA's responsibilities to this new entity. To this date, the Department of Energy continues to oversee the nuclear weapons complex. To manage the Department's waste management, environmental remediation, and environmental compliance activities, the Secretary of Energy consolidated these functions in 1989 into the Office of Environmental Management. The Office of Environmental Management assumed a majority of these responsibilities, and the budgets to implement them, from functions previously exercised by the Office of Defense Programs, and, to a lesser degree, from the Offices of Nuclear Energy and Energy Research.

³ A comprehensive history of the AEC can be found in Hewlett, Richard G. and Francis Duncan. *Atomic Shield, 1947-1952, Volume II of A History of the United States Atomic Energy Commission* (University Park: Pennsylvania State University Press, 1969); and Hewlett, Richard G. And Jack M. Holl, *Atoms for Peace and War, 1953-1961, Volume III of A History of the United States Atomic Energy Commission* (Berkeley: University of California Press, 1989).

⁴ The history of the DOE is described in Fehner, Terence K. And Jack M. Holl, *Department of Energy, 1977-1994: A Summary History*, DOE/HR-0098 (U.S. Government Printing Office, 1994). The events leading up to the establishment of the Environmental Management program are described in Gosling, F.G., *Closing the Circle: The Department of Energy and Environmental Management, 1942-1994*, DOE History Division, Draft, March 1994.